

CLAIMS:

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1. An electrical apparatus having an actuator including at least two permanent magnets (1, 1a) and at least one electrical coil (2) which is movably supported by means of a swing arm (3), which coil is arranged to be traversed by magnetic fields of the permanent magnets (1, 1a), the actuator having a cage (4), which encloses the coil (2) and the permanent magnets (1, 1a), as a closed magnetic return path.

2. An electrical apparatus as claimed in claim 1, characterized in that the cage (4) is made of soft-iron or steel and is shaped so as to shield the magnetic stray fields of the magnets (1, 1a).

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3. An electrical apparatus as claimed in claim 1, characterized in that the swing arm (3), which is secured to the coil (2) is supported on a pivot (5), and the pivot (5) is arranged at the inner side of the sector-shaped permanent magnets (1, 1a).

15 4. An electrical apparatus as claimed in claim 1, characterized in that the swing arm (3), which is supported on a pivot (5), is preloaded with respect to a housing (8) by means of a torsion spring (6).

20 5. An electrical apparatus as claimed in claim 1, characterized in that the swing arm (3) is preloaded with respect to a housing (8) by means of at least one blade spring (12).

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25 6. An electrical apparatus as claimed in claim 1, characterized in that at least a second pivot (11) is arranged at the outer side of the sector-shaped permanent magnets (1, 1a), and at least one pivotal joint (9) is present, which pivotal joint couples a first swing arm (3) supported on the first pivot (5) and a second swing arm (10) supported on the second pivot (11) in a pivotable manner and so as to be slidable with respect to one another, the pivots (5, 11) being secured to a housing (8).

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- 5 8. An electrical apparatus as claimed in claim 1, characterized in that the bounding surfaces of the cage (4), which originally extend parallel to the plane of oscillation of the coil (2), taper towards the side that is remote from the pivot (5), and the bounding surfaces of the coil (2) and the magnets (1, 1a) are adapted accordingly.

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